

### REMARKS

Entry of this Amendment is proper because it narrows the issues on appeal and does not require further searching by the Examiner.

Claims 1-3, 6 and 8-19 are all the claims presently pending in the application. Claims 4-5 and 7 have been canceled. Claims 1, 2, 6 and 10 have been amended to more particularly define the invention.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1 and 6 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Luo et al. (U. S. Patent 7,092,573). Claims 2, 3, 8, 9 and 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ray et al. (U. S. Patent 6,940,545) in view of Lobo et al. (U. S. Patent 5,835,616) further in view of Luo.

Claims 4, 5, 7, 10 and 14-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ray, Lobo and Luo and further in view of Sannoh et al. (U. S. Patent Pub. No. 2003/0071908 A1).

These rejections are respectfully traversed in view of the following discussion.

#### I. THE CLAIMED INVENTION

The claimed invention (e.g., as recited in claim 1) is directed to an image processing method for performing image processing on image data. The method includes generating face region information to identify the face region from the image data, determining an operating mode of a device performing the image processing, and performing noise reduction on the face region of the image data based on the face region information **when the determined operating mode includes a high-speed operating mode** (Application at page 6, lines 7-12; page 10, lines 6-19).

Conventional devices perform a noise reduction on an entire image. However, this removes the edge component of a contour resulting in a flat image as a whole (Application at page 2, lines 12-19).

An exemplary aspect of the claimed invention, on the other hand, may perform noise reduction on the face region of the image data based on the face region information **when the determined operating mode includes a high-speed operating mode** (Application at page 6, lines 7-12; page 10, lines 6-19). These features may help to allow the invention to avoid removing an edge component in a mode (e.g., a mode other than a high-speed mode).

## II. THE ALLEGED PRIOR ART REFERENCES

### A. Luo

The Examiner alleges that Luo teaches the claimed invention of claims 1 and 6. Applicant submits, however, that there are features of the claimed invention that are not taught or suggested by Luo.

However, Applicant submits that Luo does not teach or suggest "*performing noise reduction on the face region of said image data based on said face region information when the determined operating mode comprises a high-speed operating mode*", as recited, for example, in claim 1 (Application at page 6, lines 7-12; page 10, lines 6-19). As noted above, this may help to allow the invention to avoid removing an edge component in a mode (e.g., a mode other than a high-speed mode).

Clearly, this novel feature is not taught or suggested by Luo.

The Examiner alleges on page 3 of the Office Action that Luo teaches "an operating mode for detecting a subject matter" and "an operating mode for enhancing image". However, even assuming arguendo that Luo teaches plural "operating modes", nowhere does Luo teach or suggest **determining an operating mode** of a device, and performing noise reduction **when the determined operating mode includes a high-speed operating mode**.

Instead, Luo teaches that an image enhancement operation is selected from a collection of predetermined enhancement operations 44 (Luo at col. 7, lines 9-11; Figure 1). Importantly, the

**amount of image enhancement is determined by the subject matter in the image.** That is, "[t]he amount of image enhancement applied to any particular image or any particular region in an image is selected to be appropriate for the specific image content" (Luo at col. 3, lines 56-67) (emphasis added).

That is, Luo teaches **not** that image enhancement is performed when a high-speed operating mode is determined, but instead, Luo teaches that image enhancement is performed **based on the content of the image.** That is, for example, Luo teaches determining the content of the image and performing image enhancement **when the content of the image includes human flesh** (Luo at col. 7, lines 20-31).

Therefore, Applicant submits that there are features of the claimed invention that are not taught or suggested by Luo. Therefore, Applicant respectfully requests that the Examiner withdraw this rejection.

#### **B. Ray and Lobo**

The Examiner alleges that Ray would have been combined with Lobo and Luo to form the invention of claims 2, 3, 8, 9 and 11-13. Applicant submits, however, that these alleged references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention.

Applicant submits that these alleged references are unrelated. Indeed, no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

In fact, Applicant submits that the references provide no motivation or suggestion to urge the combination as alleged by the Examiner. Indeed, these references clearly do not teach or suggest their combination. Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

Moreover, neither Ray, nor Lobo, nor Luo nor any alleged combination thereof teaches or suggests *"a control unit that operates said face region identification unit and said noise*

*reduction unit when said determined photography mode comprises a high-speed photography mode*", as recited, for example, in claim 2 (Application at page 6, lines 7-12; page 10, lines 6-19). As noted above, this may help to allow the invention to avoid removing an edge component in a mode (e.g., a mode other than a high-speed mode).

Clearly, this novel feature is not taught or suggested by Ray or Lobo.

Indeed, the Examiner alleges on page 4 of the Office Action that Ray teaches a "framing mode" and a "final image mode" which the Examiner attempts to equate with the photography mode of the claimed invention. However, nowhere does Ray teach a control unit that operates a face region identification unit and a noise reduction unit **when a determined photography mode includes a high-speed photography mode**.

Instead, Ray teaches that the camera always operates first in a framing mode, and that the camera always performs a face detection algorithm 90 (Ray at col. 6, lines 48-62). Therefore, there is clearly no reason to "determine" an operating mode in Ray, since face detection is always going to be performed.

Moreover, **nowhere does Ray teach or suggest that a speed of an operating mode has anything to do with whether face region identification or noise reduction is performed**. Therefore, Ray clearly does not make up for the deficiencies in Luo.

Likewise, Lobo does not teach or suggest the novel features of the claimed invention. Indeed, Lobo simply teaches a process for automatically finding a human face in a digital image (Lobo at Abstract). Nowhere does Lobo teach or suggest a control unit that operates a face region identification unit and a noise reduction unit **when a determined photography mode includes a high-speed photography mode**.

Therefore, Lobo clearly does not make up for the deficiencies in Ray and Luo.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention. Therefore, Applicant respectfully request that the Examiner withdraw this rejection.

**C. Sannoh**

The Examiner alleges that Ray, Lobo and Luo would have been combined with Sannoh to form the invention of claims 4, 5, 7, 10 and 14-19. Applicant submits, however, that these alleged references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention.

Applicant submits that these alleged references are unrelated. Indeed, no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

In fact, Applicant submits that the references provide no motivation or suggestion to urge the combination as alleged by the Examiner. Indeed, these references clearly do not teach or suggest their combination. Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

Moreover, neither Ray, nor Lobo, nor Luo, nor Sannoh, nor any alleged combination thereof teaches or suggests "*a control unit that operates said face region identification unit and said noise reduction unit when said determined photography mode comprises a high-speed photography mode*", as recited, for example, in claim 2 (Application at page 6, lines 7-12; page 10, lines 6-19). As noted above, this may help to allow the invention to avoid removing an edge component in a mode (e.g., a mode other than a high-speed mode).

Clearly, this novel feature is not taught or suggested by Sannoh.

Indeed, the Examiner attempts to equate the CPU 115a in Sannoh with the control unit of the claimed invention. However, this is completely unreasonable.

In fact, Sannoh simply teaches that the CPU 115a executes a control program to carry out face detection (Sannoh at [0153]), judges if a photometric method has been set and if so, determines if optical intensity is to be measured only by a face portion (Sannoh at Figure 14A; [0159]).

Sannoh teaches that face detection processing may be performed when a human object

photographing mode is selected (Sannoh at [0136]).

However, **nowhere does Sannoh teach or suggest that a speed of an operating mode has anything to do with whether face region identification or noise reduction is performed.** Therefore, Sannoh clearly does not make up for the deficiencies in Ray, Luo and Lobo.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention. Therefore, Applicant respectfully request that the Examiner withdraw this rejection.

### III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-3, 6 and 8-19, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

To the extent necessary for submitting this response, Applicant hereby petitions for an extension of time under 35 C. F. R. 1.136. The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,



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